

LSRL practice worksheet answers:

1) negative, linear, moderately strong

2) yes- plot is linear, and we have a high correlation

3)  $y = 260.5639 - 22.9688x$   
heart =  $260.5639 - 22.9688(\text{wine})$

4) 1.5 sd above mean  $\Rightarrow$  6.7909 liters

$\Rightarrow$  heart =  $260.5639 - 22.9688(6.7909)$   
heart = 104.5851 deaths per 100,000 people

5)  $-1.8 \text{ sd} \Rightarrow 67.93966$  deaths per 100,000 people

$$\begin{aligned} \Rightarrow \quad 67.93966 &= 260.5639 - 22.9688(\text{wine}) \\ \text{wine} &= 8.3683 \text{ liters} \end{aligned}$$

6) deaths per 100,000 people / liter

7) For every 1 liter increase in the wine consumption of a country, the deaths decrease by 22.9688 per 100,000 people.

8) heart = 164.095 deaths per 100,000 people

9)  $173 - 164.095 = 8.905$  underestimate

10)  $-90.8587$  deaths per 100,000 people. NOT confident!

11)  $r^2 = 0.7103$

71.03% if the change in the heart disease death rate is due to the change in the in wine consumption.

12) 28.97%                      - genetics, diet, exercise, etc.

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1) policies =  $-1.7425 + 0.5497(\text{minutes})$

2) minutes =  $7.9564 + 1.4203(\text{policies})$